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60/479,758 19 June 2003 (19.06.2003) US(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

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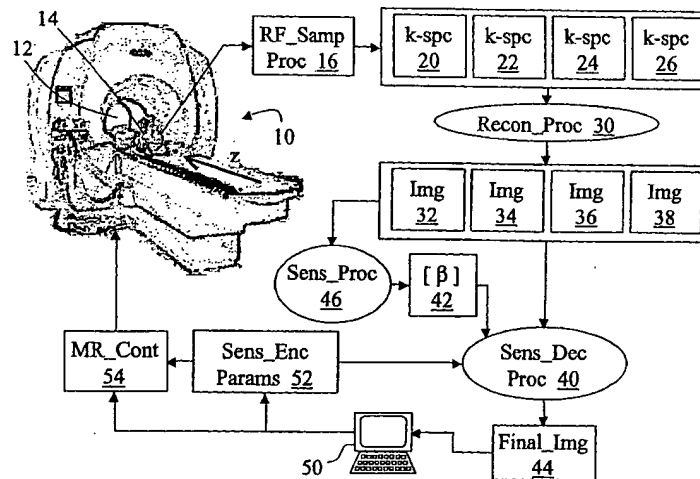
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(54) Title: MR IMAGING WITH SENSITIVITY ENCODING IN THE READOUT DIRECTION



(57) Abstract: A magnetic resonance imaging system acquires a final image of a selected field of view with a selected spatial resolution. A magnetic resonance imaging scanner (10) encodes and receives magnetic resonance samples in phase encode and readout directions using a plurality of receive coils (14). The encoding and receiving undersamples in the readout direction. A reconstruction processor (30) reconstructs magnetic resonance samples acquired by each of the plurality of receive coils (14) into a corresponding plurality of intermediate reconstructed images. Each intermediate reconstructed image has aliasing and in some aspects degraded high spatial frequency characteristics due to the reduced sampling in the readout direction. A combining processor (40) combines the plurality of intermediate reconstructed images based on coil sensitivity factors (42) to produce the final reconstructed image with the selected field of view and the selected spatial resolution in the readout direction.



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